

INTER-V4 REALM ROUTING

ABSTRACT OF THE DISCLOSURE

Packets may be forwarded between realms employing private unregistered

5 addresses without the use of network address translation and/or application level
gateways. Nodes within privately addressed realms are identified by a combination of
their locally significant address and a globally significant realm address. The globally
significant addresses are reserved in all realms for use as realm identifiers or inter-realm
routing. To send a packet to a node within a distinct private realm, the packet is given an
10 inner IP header designating the locally significant destination IP address of the target
node within the remote realm and an encapsulation IP header indicating the globally
significant address advertised by the gateway of the target node's realm. The globally
significant address is used for forwarding outside the realm of the destination node. Once
the packet reaches the destination realm, the locally significant address is used for
15 forwarding.